

**Amendments to the Specification**

Please replace paragraph [28] with the following amended paragraph:

[28] At startup and at other times as necessary, the system controller 36 may operate the detector 22 in each mode of operation automatically. When MODE 1 is selected, switch 84 is put in a “first image” position. In this configuration, the incoming dark image replaces the contents of the offset image memory 70. Once the first dark image is stored, switch 84 is switched back to its original position, as illustrated in FIG. 3. Subsequently, one or more additional dark images are acquired. As each image is acquired, it is combined with the contents of the offset image memory 70 as discussed below. The process of acquiring initial and subsequent dark images in order to create an offset image is repeated for each mode of operation. For example, Mode 2 may be selected and switch 90 put in a “first image” position. In this configuration, the incoming dark image replaces the contents of the offset image memory 72. Once the first dark image is stored, switch 90 is switched back to its original position, as illustrated in FIG. 3. Therefore, the acquisition of new and/or updated offset images may be transparent to the operator.

Please replace paragraph [37] with the following amended paragraph:

[37] At step 104 ~~402~~, the system controller 36 determines what mode of operation, and thus which offset image memory 70 and 72 in the image processor memories 29 and 31 will be used. For example, the system controller 36 may determine whether the center portion of the detector 22 is being imaged, or whether binning is utilized to image the entire detector 22. The mode of operation may be changed by the operator through the operator interface 38 before or during the diagnostic procedure as previously discussed. Because the x-ray system 14 utilizes more than one offset image memory 70 and 72 to store offset images for more than one mode, the mode of operation may be changed during a patient procedure without halting the acquisition of patient data. Once the mode

of operation is determined, the system controller 36 sets switch 64 (FIG. 3) or switches 96 and 98 (FIG. 4) to the appropriate setting. For the following discussion, switches 64, 96 and 98 are set to MODE 1, as illustrated in FIG. 3 and 4.

Please replace paragraph [38] with the following amended paragraph:

[38] At step 102 ~~104~~, the system controller 36 determines whether the detector 22 was exposed to x-rays during the image acquisition. If no, the incoming image 62 is a dark image. Switch 68 is set to "detector not exposed to x-rays" and flow passes to step 104 ~~106~~.

Please replace paragraph [40] with the following amended paragraph:

[40] If the system controller 36 determines at step 102 ~~104~~ that the detector 22 has been exposed to x-rays, switch 68 is set to "detector exposed to x-rays" and flow passes to step 112. At step 112, the system controller 36 sets the switch 66 (FIG. 3) to the appropriate setting. Continuing the example above, switch 66 is set to MODE 1. At step 114, the ~~The~~ image processor 28 then subtracts the offset image stored in the offset image memory 70 from the incoming image 62 with subtractor 86. The result is the corrected image 88, which may be displayed on the monitor 32 and/or stored in the image storage 30. Flow then returns to step 100, where the next incoming image 62 is acquired.